Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Open Network Architecture	)	CC Docket No. 92-91
Tariffs of Bell Operating	)	
Companies	)	

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MAY 1 8 1992

Federal Communications Commission
Office of the Secretary

DIRECT CASE

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Summary

In this proceeding, the Bureau is investigating the costing and pricing methodologies utilized by the BOCs to determine the costs and rates for their initial ONA services. BellSouth responds to each of the issues designated by the Bureau for investigation, and demonstrates that its methodologies are reasonable and are fully consistent with the Commission's requirements for the pricing of new services as well as with the Commission's ONA goals.

In determining whether to impose constraints upon BOCs for the pricing of new services under Price Caps, the Commission determined that a "flexible cost-based approach" would best satisfy the Commission's goals of assuring that BOCs would have the flexibility to price efficiently and the incentive to innovate. The Commission further determined that such an approach would best satisfy its concerns regarding excessively high rates and discriminatory pricing. The Bureau should not and cannot deviate from this flexible approach to the costing and pricing of services in this investigation.

In reviewing the BOCs' costing and pricing methodologies, the Bureau should not focus upon a comparison of cost and price results achieved from BOC to BOC as a result of the various approaches taken among the BOCs. Given that the Commission has not mandated that one uniform

means be followed for identifying costs and establishing prices, the Bureau should rather focus upon whether or not the methodologies utilized by each BOC, in and of themselves, are reasonable and consistently applied across all BSEs filed by that BOC. When the Bureau does this, it will be evident that the costing and pricing approach adopted by BellSouth is reasonable, meets all of the Commission's requirements and, indeed, furthers the Commission's goals.

BellSouth performed a long-run incremental analysis to identify the investment and costs directly attributable to its BSEs in order to establish the price floor for those services. Such an approach is the correct economic tool to identify the price floor for services and is fully consistent with the Commission's ONA goals. Furthermore, the identification of the price floor by the use of an incremental analysis is consistent with the Commission's goals of assuring the flexibility to price efficiently and the existence of appropriate incentives to innovate. Additionally, such an approach is non-discriminatory and does not lead to excessive rates.

To establish the rates for its BSEs, BellSouth loaded the incremental costs of its BSEs in a uniform manner based upon a loadings factor developed from the relationship of local switching incremental costs and local switching revenues. Although uniform loadings were not required under the Commission's rules; the methodology clearly is permitted under the Commission's rules. Further, it removes the possibility of discriminatory loadings. Finally, such an approach, although it may not have identified the maximum "just and reasonable" loadings for such services, clearly cannot be said to have exceeded any such maximum given that the loadings applied are at the same relationship as applies to existing local switching services and their incremental costs.

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DIRECT CASE

BellSouth Telecommunications, Inc. ("BellSouth") hereby submits its Direct Case in the above-captioned investigation proceeding.

I. INTRODUCTION.

In this proceeding, the Common Carrier Bureau ("Bureau") is investigating certain matters relating to the rates established by the Bell Operating Companies ("BOCs"), including BellSouth, in their initial ONA access tariff filings.[1] The Bureau states that

> the issues designated are primarily designed to permit examination of the wide disparity in rate levels of BSEs among the BOCs to determine if the various rate levels are reasonable.[2]

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[1] BellSouth filed its initial ONA access tariff under BellSouth Telephone Companies Tariff F.C.C. No. 4, Transmittal No. 436, on November 1, 1991. Subsequent amendments to this filing were made on November 25, 1991, under Transmittal No. 442, on January 29, 1992, under BellSouth Telecommunications, Inc. Tariff F.C.C. No. 4, Transmittal No. 11, and on February 14, 1992 under BellSouth Telecommunications, Inc. Tariff F.C.C. No. 1, Transmittal No. 19.

[2] Open Network Architecture Tariffs of Bell Operating Companies, CC Docket No. 92-91, Order Designating Issues for Investigation (DA 92-483), released April 16, 1992 ("Designation Order").

The specific issues designated relate primarily to the BOCs' cost methodologies used to identify direct costs to establish price floors for their BSEs and the methods whereby overheads were loaded onto the direct costs to establish the actual rates.[3] In this Direct Case, BellSouth responds to the specific issues designated, demonstrating that the methodologies utilized are fully consistent with the Commission's ONA requirements and policies and that rate levels established for BellSouth's BSEs are reasonable.

First, BellSouth shows that the use of long-run incremental investment and costs is consistent with the Commission's requirements and policies. Next, BellSouth shows that, in developing the long-run incremental investment for its BSEs, BellSouth used those switching offices consistent with a long-run incremental cost approach. Third, BellSouth shows that the cost of money factor used to develop costs is reasonable and consistent with a long-run incremental cost methodology. As to loadings, BellSouth justifies the methodology utilized to determine and apply loadings for its BSE services, and demonstrates that the rates are reasonable.

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[3] The Bureau is investigating BOCs' cost and pricing methodologies as they relate to recurring costs and rates, not as they relate to nonrecurring costs and charges.

II. THE COMMISSION HAS ADOPTED A FLEXIBLE COST-BASED APPROACH FOR THE PRICING OF NEW ONA SERVICES.

In its ONA Report and Order,[4] the Commission concluded that ONA services should be regulated under the Commission's Price Cap rules and required that the unbundled and new BSEs be treated as new services.[5] Generally speaking, under the Commission's Price Caps rules the prices which a carrier may establish for a new service are bounded by a price floor and a price ceiling. As to the price floor, rates must be established at levels sufficient to assure that the new service "will generate a net revenue increase" within a stated period of time.[6] As to the price ceiling, rates must be established low enough so as to "not recover more than a just and reasonable portion of the carrier's overhead costs."[7]

In the ONA Report and Order, the Commission considered the extent of the flexibility which should be afforded to LECs to price ONA services within these upper and lower

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[4] Amendments of Part 69 of the Commission's Rules Relating to the Creation of Access Charge Subelements for Open Network Architecture, CC Docket No. 89-79, Policy and Rules Concerning Rates for Dominant Carriers, CC Docket No. 87-313, Report and Order & Order on Further Reconsideration & Supplemental Notice of Proposed Rulemaking, 6 FCC Rcd 4524 (1991) (hereinafter "ONA Report and Order").

[5] The Commission also required LECs to residually price the BSAs, using a restructure test which included consideration of revenues from the unbundled BSEs.

[6] 47 C.F.R. Section 61.49(g)(1).

[7] 47 C.F.R. Section 61.49(g)(2).

bounds. The Commission recognized the need to provide LECs with the flexibility to price efficiently and the incentive to innovate, while at the same time the need to protect against excessively high rates and unreasonably discriminatory pricing.[8]

The Commission settled upon a "flexible cost-based approach"[9] which it believed would best meet the foregoing needs. The approach was a flexible one because LECs would be permitted to develop their own cost methodologies for the identification of the direct costs of the service and were not required to load overhead costs onto direct costs in a uniform manner.[10] This would afford LECs a level of flexibility to price efficiently and to innovate. At the same time, the requirement for LECs to make a net revenue showing would protect against predatory pricing, and the requirement to justify their loadings onto direct costs would protect against both discriminatory pricing and excessive pricing.

The issues designated by the Commission in this investigation are focused upon the price floors and price ceilings established by LECs for their BSEs, as well as the actual rate levels themselves. By designating Issues 1 through 4, the Commission is investigating the

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8 ONA Report and Order, para. 38.

9 Id., para. 38.

10 Id., para. 44.

reasonableness of the price floors established by the BOCs, and by designating Issues 5 through 7 the Commission is investigating the reasonableness of the loadings to arrive at the actual price levels chosen. BellSouth discusses each of these issues below.

III. BELLSOUTH'S UTILIZATION OF A LONG-RUN INCREMENTAL COST APPROACH IN IDENTIFYING THE DIRECT COSTS OF THE BSES IS CONSISTENT WITH THE COMMISSION'S ONA PRICING REQUIREMENTS AND POLICIES.

A. ISSUE 1 - Identification of Direct Investment

The Commission designated the first set of issues to be investigated as follows:

> (1) Is the development of unit investment for BSEs on the basis of the (short run) marginal investment option of SCIS and SCM a reasonable method that is consistent with the Commission's ONA requirements and policies?
>
> BellSouth and Southwestern Bell are directed to respond to this question. Those carriers shall also provide in their direct cases comprehensive alternative BSE rates that reflect use of the average basis assumption within the SCIS model.[11]

BellSouth developed the direct costs necessary to establish the price floor for BSEs by using the Switching Cost Information System ("SCIS") model to identify the long-run incremental, i.e. marginal, investment associated with each BSE, and then developing the long-run incremental, i.e. marginal, costs based upon that investment.[12] Contrary to

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[11] Designation Order, para. 3(1).

[12] The terms "incremental" and "marginal" will be used synonymously and interchangeably throughout this Direct (continued...)

the Commission's apparent misunderstanding, BellSouth did not identify "short-run" marginal investment.

The use of long-run incremental costs is a reasonable method to determine the price floor for BSE services.[13] The method is both the economically correct means for identifying the price floor for a service[14] as well as a reasonable means in light of the Commission's ONA requirements and policies.

Incremental costs reflect those costs which will be incurred by a firm which are directly attributable to the offering of a product or service. In other words, incremental costs are those costs which would be saved if the firm did not offer the product or service. Incremental costs are used to test the price of a product or service to determine whether that price is established at a level sufficient to, at a minimum, recover from the product or service those costs which the firm would otherwise not have

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[12](...continued) Case, unless otherwise indicated. Incremental, or marginal, costs are also referred to as direct costs herein.

[13] In testimony before the Florida Public Service Commission, in Docket No. 880812-TP, September 1, 1989, Dr. Richard D. Emmerson, a noted economist with substantial experience and expertise in telecommunications costing issues, stated "[t]he prices charged by the local exchange company for its services should be set over time, at levels sufficient to recover over time, the long run marginal cost...." This testimony is attached hereto as Exhibit A.

[14] See Alfred E. Kahn, The Economics of Regulation: Principles and Institutions, Vol. 1, Economic Principles, John Wiley & Sons, Inc. (1970).

incurred had the firm not offered the product or service. A long-run view allows for consideration of the changes in investment which will occur over the long-term, by reason of factors such as demand. It is long enough for the firm to vary items which in the short run are considered fixed, such as plant, equipment and business commitments. A short-run view is inadequate because it does not allow for such factors to be considered.

SCIS identifies technology-specific unit incremental investment associated with each component of a switch technology. In the version of SCIS used by BellSouth, two options for the calculation of processor investment were available: an incremental (i.e. marginal) run option and an average run option. Consistent with BellSouth's long-run incremental costing methods, BellSouth used the marginal run option.

Where the marginal run option of SCIS is utilized, and the provisioning of planned product or service demands will not cause the processor to exhaust, the incremental investment associated with the additional demand will be zero. In its most general terms, this is because the additional demand associated with the BSE will not cause any advancement of planned investments to occur, i.e., no further capital expenditure is required as a result of the provisioning of the BSE. However, where the processor capacity is expected to exhaust due to anticipated demand, then the additional demand associated with the BSE is viewed as the direct cause of the advancement of the capacity expansion, and the SCIS model calculates the "capacity cost" of the processor.[15] The average processor utilization over time, i.e., the processor utilization factor ("PUF"),[16] is not relevant to a determination of the costs which would be saved by a decision not to provide the BSE and, therefore, the PUF is not applied in the identification of marginal run investment.

BellSouth did not use the average run option of SCIS because that option produces a "revenue requirement"-type cost, not a cost that would be saved if the BSE were not provided. An average cost analysis is not the correct economic tool to identify the price floor for a service. In contrast to the marginal SCIS option, which considers only the direct economic costs, i.e. the incremental or marginal costs, of a service, the average SCIS option allocates costs to a service which are not related to the costs caused by that service. To do so, the average SCIS option considers

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[15] The capacity cost formula in SCIS is the getting started investment divided by the maximum usable realtime processing capacity (in milliseconds or cycles). The getting started investment relates to the investment required in the switch prior to serving any customers and consists mainly of processor investment.

[16] The processor utilization factor is defined as the ratio of the present worth of the actual utilization over time to the present worth of the maximum usable capacity of the processor over the same period of time. Thus, for example, a 60% PUF would mean that the processor is 40% under-utilized.

the extent to which the processor is utilized or under-utilized and attempts to allocate growth capacity costs in the processor to all units in service.[17]

The allocations under an average cost approach are inherently arbitrary because they allocate costs to the service which would exist whether or not the service is provided. In addition, an average cost approach is not an economically efficient means of identifying the price floor for a service. This is because such an approach ignores the fact that the service not only does not cause under-utilization but, on the contrary, can decrease the extent of the under-utilization which would otherwise exist, assuming a price at a level the market is willing to pay. In short, the approach does not allow for establishment of a price floor consistent with an evaluation of whether the firm will be better off with the service than without.

To illustrate the difference in an average cost run and a marginal cost run in SCIS, an example of each, reduced to the most simplified terms, is provided. Assume a processor out of which a BSE is to be provided is valued at $100, is capable of serving 100 milliseconds, and has a PUF of 50%. Under SCIS, an average investment would be $100/(100 milliseconds times 50%) = $2 per millisecond. Under the same example, a marginal calculation would yield $100/100

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[17] The average run option equation used reflects this methodology: getting started investment divided by the product of the realtime capacity, times the PUF.

milliseconds = \$1 per millisecond. This simple example demonstrates the difference between the two SCIS options and the underlying difference in cost philosophy. The marginal option yields long-run incremental costs whereas the average option produces "revenue requirements"-type or cost recovery results. The \$2 result under the average cost option forces existing units to bear the full processor related investment, requiring the allocation of the under-utilized capacity to all in-service units.

As can be seen, the average cost approach allocates to the service more costs than would be identified using the incremental cost approach. The average analysis allocates to the service under-utilized capacity which would be present even without the new service, and the incremental analysis identifies only those costs which are incurred because the new service is offered. Thus, the incremental cost approach is a rational one which is tied directly to cost causation and is the appropriate economic means for identifying the price floor and determining whether the service will achieve a positive net revenue. In contrast, the average cost approach is an arbitrary one which is not tied to the costs caused by the BSE and thus establishes an artificially high floor. The allocations resulting from an average method are arbitrary, as they are dependent upon the extent of the utilization or under-utilization of the particular switch, caused by reasons wholly independent of the BSE. Thus the use of the average approach does not help answer the question: what costs will a firm incur by the provisioning of a service? Given these deficiencies, the average cost analysis should not be used to identify the price floor.

1. The Use Of Long-Run Incremental Investment And Costs Is Consistent With The Commission's Pricing Requirements For New ONA Services.

The only requirements, *per se*, established in the Commission's rules as to a price floor for new services under the Price Caps rules, is that the direct costs of the service be identified and that the new service generate revenues sufficient to cover those costs, i.e. that the new service achieve a positive net revenue, within the stated time period. As discussed previously, the Commission, in adopting these requirements for ONA services, specifically indicated that each BOC could develop its own costing methodology. The Commission stated,

> LECs may develop their own costing methodologies, but they must use the same costing methodology for all related services. For example, the same methodology must be used for all BSEs unbundled from local switching.[18]

The Commission has clearly approved the use of incremental costs as a means to establish the price floor for a new service. In the Price Cap Reconsideration Order, the Commission stated,

[18] ONA Report and Order, para. 42.

> In an environment in which LECs face emerging competition for access service, the net revenue showing is a useful mechanism to guard against predatory pricing. Thus, the rates price cap LECs file for new services must continue to demonstrate that _incremental revenue_ exceeds _incremental_ _cost_.[19]

BellSouth's use of long-run incremental investment and costs is consistent with all of these requirements. The long-run incremental investment for the BSEs was used to develop the direct costs of the BSEs. The same methodology was used for all the BSEs. The resulting costs were then compared to the incremental revenues for the new services, and a net revenue showing was made. The Commission's requirements specifically allow BellSouth to choose its own costing methodology and, in fact, the methodology BellSouth utilized was one which has been endorsed by the Commission, i.e. the use of incremental costs to determine the price floor.

Indeed, given the Commission's express indication that BOC's have the flexibility to develop their own costing methodologies, the Bureau should not focus its investigation on the variance in "costs" identified from BOC to BOC. The identified costs will necessarily vary depending upon whether an incremental or an average, a forward-looking or embedded,[20] analysis is made. Furthermore, costs will

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[19] Policy and Rules Concerning Rates for Dominant Carriers, CC Docket No. 87-313, Order on Reconsideration, 6 FCC Rcd 2637 (1991), para. 127 (emphasis supplied).

[20] The inappropriateness of using embedded costs is discussed in Section III.D. _infra_.

necessarily vary among the BOCs due to differences in the mix of technology used by each.[21] The focus of any investigation should therefore be whether the methodology chosen by the BOC (be it incremental or average or otherwise) was reasonable in and of itself and whether such methodology was applied consistently across all of a given BOC's BSEs.

2. <u>The Use Of Long-Run Incremental Investment And Costs Is Consistent With The Commission's ONA Policies</u>.

As stated previously, the Commission chose a "flexible cost-based approach" to BSE pricing which it believes would best help to achieve realization of four goals. The Commission described the four goals as follows:

> Certainly, we want LECs to have the flexibility to price efficiently and the incentive to innovate. However, we also want to prevent LECs from setting excessively high rates and to protect against unreasonably discriminatory pricing....[T]he option that appears to meet these goals best is a flexible cost-based approach to pricing new services.[22]

Each of these goals is discussed below as it relates to BellSouth's utilization of a long-run incremental cost approach.

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[21] For instance, even if all BOCs had used an incremental cost approach, the resulting costs would most likely vary due to the difference in the mix of technology use.

[22] ONA Report and Order, para. 38.

a. Flexibility to Price Efficiently.

The first of the stated goals is to assure that LECs have sufficient flexibility to price efficiently. The use of incremental costs to establish the price floor for new services is consistent with this goal. By establishing the price floor at incremental costs, i.e., the direct costs of the service, rather than at average costs, the firm is afforded latitude to consider the relationship of economic costs in evaluating the range of price levels which meet market demand expectations. With the price floor established at incremental costs, rates could be established just above that level, assuming a positive net revenue showing could be made.[23] Where market conditions require, this would allow efficient pricing, as the minimum rates would merely need to be sufficient to assure that the added costs incurred as a result of offering the service are covered and that the firm is better off as a result of offering the service.

Obviously, if the floor is set too high due to the arbitrary, non-economic allocations which can result from an average cost approach, the range of potential prices is more limited, and the firm may not be better off as a result of offering the service. A requirement to establish a price floor at such a higher level would be less efficient as it

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[23] The net revenue test also involves a showing of cross-elastic revenue losses and complementary revenue gains.

would require the service to bear costs it did not cause. The sounder economic approach is to set the price floor at the minimum level necessary to assure that the firm will recover the incremental costs of offering the service with the actual rate levels over and above that determined by other factors.

b. Incentives to Innovate

Another of the Commission's ONA goals is to assure that LECs have the incentive to innovate. Innovation must be encouraged as a fundamental cornerstone of an evolving and responsive telecommunications industry in a rapidly changing society. Telecommunications firms must be encouraged to innovate in order to assure that the market has available to it a choice of the most up-to-date telecommunications technology and widest variety of service enhancements. The Commission has recognized this in establishing incentives to innovate as one of its four stated goals in establishing pricing requirements for ONA services.

BellSouth's use of a long-run incremental cost approach is not only consistent with this goal, but is the economically correct means to assure that the incentive which the Commission desires to create will be realized.

Economic factors will have a significant role in a firm's decision whether to introduce new and innovative services, some of which will be experimental in nature. In determining whether to offer innovative new services, factors considered by the firm will include consideration of the impact of the new service offering on the firm's results. Thus, a firm will consider not only what the incremental costs of that new service will be, but also what price it will be permitted to charge, what price the market will be willing to pay, and whether the firm will be better off by introducing the new service. A firm is more likely to enter into new and innovative service offerings, experimental as they may sometimes be, if it can be assured that it is required only to recover from that new service the additional costs the firm incurs as a result of offering the service.

The artificial constraints which would be imposed by a requirement to establish the price floor at average costs would chill incentives to innovate. Clearly, if prices are required to be set arbitrarily at levels higher than the market is willing to pay, then the LEC will make the decision not to provide the innovative new service. By offering the new service, the firm will not be better off, as it will have expended additional resources to offer a service at a price for which there is no market demand.[24] In order to assure that LECs will innovate, then, LECs must

[24] While the arbitrary allocation of costs and constraining the price at an artificially high level results in the non-offering of a new service, such a result is not an economically sound outcome in that resources are not being allocated efficiently. Efficient resource allocation demands an incremental analysis.

have the flexibility to meet the price the market is willing to pay, without being bound by any requirement that the new service recover any costs over and above those costs which are directly caused by the introduction of the new service.[25]

c. Policy Against Excessively High Rates

The use of incremental investment and costs to determine a price floor should have no direct bearing on how high a rate is permitted to be set. The purposes of identifying incremental costs is to test whether or not a service will "generate a net revenue increase" as required under the Commission's rules.[26] Clearly, if rates are established at the incremental cost level, they could not be considered to be excessive because such costs reflect the minimum possible rate level, not the maximum. The incremental costs of a service, therefore, do not indicate whether the rates chosen for the service are reasonable or whether the difference between rates and costs exceeds a "just and reasonable" loading.

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[25] Of course, an additional factor to be considered by the firm, and an additional incentive to innovate, would be the extent to which the firm is permitted compensation over and above the usual for undertaking unusual risks in the offering of new services, assuming a willingness to pay by the market. In this regard, the Commission has allowed BOCs to attempt to make the showing that a given new service is a "particularly risky venture." See ONA Report and Order, para. 43.

[26] 47 C.F.R. Section 61.49(g)(1).

Rates for a service should be established based upon factors such as market conditions and the value of the service to the customer. While the Commission to date has not afforded BOCs the freedom to establish rates based solely upon market considerations, the Commission has established a flexible standard to evaluate rates: rates may "not recover more than a just and reasonable portion of the carrier's overhead costs."[27] The Commission has not mandated that loadings be included in rates in any particular amount or manner, but has afforded BOCs the flexibility to choose a reasonable loadings methodology. Thus, in examining whether BOCs' rates are "excessive," the Bureau should not focus on whether a BOC utilized incremental or average costs to identify the price floor of its BSE services. Rather, the inquiry should be whether or not the rates established by that BOC include loadings which are "more than...just and reasonable."

As is discussed further in Section IV.A. and B., infra, the loadings which BellSouth has applied to the incremental costs of the BSEs are reasonable given that they merely allow the BSEs to achieve revenues in the same proportion to incremental costs as that which is achieved in the existing local switching category.

If the Bureau believes that the use of incremental costs instead of average costs has resulted in "excessive"

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[27] 47 C.F.R. Section 61.49(g)(2).

rates, the Bureau is flatly wrong. Because of the specific requirement of the Designation Order,[28] BellSouth developed the average costs for its BSEs[29] and established fictional rates based upon such costs.[30] As can be seen from Exhibit C, the averaged-based rates are generally much higher than the incremental-based rates, with increases ranging from 3.44% to 609.38%. In those cases where the average-based rates are lower, the decreases are 10.67% at most. Given this, it cannot be said that the use of incremental costs has resulted in excessive rates.

Nor are BellSouth's rates "excessive" in comparison with the rates of other BOCs. Of course, a comparison of rates among BOCs is not determinative on the issue of whether a given BOC's rates are "excessive," given that variables exist among the BOCs such as differing costing and pricing methodologies as well as the varying mix of

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[28] The Designation Order states, "BellSouth....shall also provide in their direct cases comprehensive alternative BSE rates that reflect use of the average basis assumption within the SCIS model." Designation Order, para. 3(1).

[29] These costs are provided on Exhibit B, attached hereto.

[30] The fictional rates are set forth on Exhibit C, attached hereto. Although not required to do so in establishing such fictional rates, BellSouth loaded the average costs in the same manner as it loaded the incremental costs to arrive at rates. The loadings for the average rates could be established anywhere between the incremental cost price floor and a price ceiling as long as no more than "a just and reasonable portion" of loadings be applied. The development of such rates is discussed in more detail in Section IV.A., infra.